

REMARKS

Claims 27-51 remain in the present application. Claims 1-6, 8-22 and 24-26 are cancelled herein. Claims 11-16 are cancelled herein. Claims 27-51 are added herein. Applicants respectfully assert that no new matter has been added as a result of the Claim additions. Applicants respectfully request further examination and reconsideration of the rejections based on the arguments set forth below.

Although Claims 1-6, 8-22 and 24-26 are cancelled herein, Applicants will discuss herein distinctions between the cited art and the newly-added Claims.

Claim Rejections – 35 U.S.C. §103

Claims 1, 4-5, 8-9, 11, 13-14, 16-17 and 20-21

Claims 1, 4-5, 8-9, 11, 13-14, 16-17 and 20-21 are rejected in the present Office Action under 35 U.S.C. §103(a) as being unpatentable over United States Patent Application Publication Number US 2002/0156929 by Hekmatpour (hereafter referred to as "Hekmatpour") in view of United States Patent Number 6,588,004 to Southgate et al. (hereafter referred to as "Southgate"). Claims 1, 4-5, 8-9, 11, 13-14, 16-17 and 20-21 are cancelled herein, and as such, a discussion of the 35 U.S.C. §103(a) rejections of Claims 1, 4-5, 8-9, 11, 13-14, 16-17 and 20-21 is moot.

Applicants respectfully direct the Examiner to independent Claim 27 that recites a method of generating a project datasheet file comprising (emphasis added):

accessing data associated with a configuration of a manufactured programmable system on a chip;
accessing a stylesheet associated with project datasheets; and

processing said data according to said stylesheet to automatically generate a project datasheet file, wherein said project datasheet file comprises pinout assignment data for said manufactured programmable system on a chip, and wherein said project datasheet file further comprises configuration information for at least one user module implemented in response to a user input and implemented using a block of said programmable system on a chip.

Independent Claims 36 and 43 recite limitations similar to independent Claim 27. Claims 28-35, 37-42 and 44-48 depend from their respective independent Claims and recite further limitations to the claimed invention.

Applicants respectfully assert that Hekmatpour fails to teach or suggest the limitations of “accessing data associated with a configuration of a manufactured programmable system on a chip” as recited in independent Claim 27. As recited and described in the present application, data associated with a configuration of a *manufactured* programmable system on a chip is accessed. The manufactured programmable system on a chip may be configured by a user.

In contrast to the claimed embodiments, Applicants understand Hekmatpour to teach accessing information associated with *the design of a system on a chip* (paragraph 45; paragraph 37). For example, Hekmatpour teaches that “output *from the design process* is provided to users 414” (paragraph 45) as shown in Figure 4 of Hekmatpour. Further, Hekmatpour refers to the data provided to users as “optimized design data” and “design dataset” (paragraph 45). Further, Hekmatpour states that Figure 4 shows a “SOC design methodology” (paragraph 43), where Figure 4 “tracks the stages of the SOC design” (paragraph 44). Applicants respectfully assert that a SOC in design as taught by Hekmatpour is not a manufactured programmable system on a chip as claimed. Accordingly, Applicants reiterate that Hekmatpour fails to teach or suggest the limitations of “accessing data associated with a configuration of a

manufactured programmable system on a chip” as recited in independent Claim 27.

Applicants respectfully assert that Southgate, either alone or in combination with Hekmatpour, also fails to teach or suggest the limitations of “accessing data associated with a configuration of a manufactured programmable system on a chip” as recited in independent Claim 27. In contrast to the claimed embodiments, Applicants understand Southgate to teach a graphic editor for designing circuits (Abstract). As discussed above, Applicants respectfully assert that an integrated circuit in design is not a manufactured programmable system on a chip as claimed. Accordingly, Applicants reiterate that Southgate also fails to teach or suggest the limitations of “accessing data associated with a configuration of a manufactured programmable system on a chip” as recited in independent Claim 27.

Page 4 of the rejection states that Hekmatpour fails to teach or suggest the limitations of “wherein said project datasheet file comprises pinout assignment data for said programmable system on a chip” as recited in independent Claim 1, and newly-added Claim 27. Applicants concur.

Applicants respectfully assert that Southgate, either alone or in combination with Hekmatpour, also fails to teach or suggest the limitations of “wherein said project datasheet file comprises pinout assignment data for said programmable system on a chip” as recited in independent Claim 27. As recited and described in the present application, a project datasheet file comprises pinout assignment data for a programmable system on a chip.

In contrast to the claimed embodiments, Applicants understand Southgate to teach a graphic editor for creating a high-level block diagram *without* pinout assignment data. For example, Southgate teaches that the graphic editor may be used to create block diagrams as “design entry points,” where *other tools* may then be used “to implement down to the gate level design” (col. 3, lines 3-8). Applicants respectfully assert that gate level design does not involve the level of specificity associated with pin assignment data. Moreover, Southgate expressly teaches that *other tools* are used to get down to the gate level design, and that the graphic editor taught by Southgate merely provides high level block diagrams. As such, since gate level design does not involve pinout assignment data, and gate level design is more specific than high level block diagrams of the design, Applicants reiterate that Southgate fails to teach or suggest pinout assignment data as claimed.

Further, as shown in Figure 1 of Southgate, the overall block diagram of the integrated circuit does not reference pins (e.g., pin numbers, etc.) of the integrated circuit. Further, as acknowledged by page 4 of the rejection, Southgate is directed to a graphical editor “including inputs and outputs for each gate *within*” an integrated circuit as opposed to *pinout* connection data of an integrated circuit as claimed. Moreover, Southgate teaches the use of generalized conduits which represent multiple signals (Figure 1; col. 4, lines 34-35; col. 7, lines 3-6), e.g., A[7...0], B[7...0], etc., instead of more specific pin-level data as claimed. Accordingly, Applicants reiterate that Southgate fails to teach or suggest the limitations of “wherein said project datasheet file comprises pinout assignment data for said programmable system on a chip” as recited in independent Claim 27.

Further, Applicants fail to find any teaching or suggestion in Southgate of pinout assignment data *for a programmable system on a chip* as recited in independent Claim 27. Although page 4 of the rejection states that Southgate discloses an “integrated circuit design including inputs and outputs for each gate within a system on a chip,” Applicants fail to find such a teaching or suggestion in Southgate. As such, Applicants respectfully assert that Southgate fails to teach or suggest the limitations of “wherein said project datasheet file comprises pinout assignment data *for said programmable system on a chip*” as recited in independent Claim 27.

Applicants respectfully assert that both Hekmatpour and Southgate, either alone or in combination, fail to teach or suggest the limitations of “wherein said project datasheet file further comprises configuration information for at least one user module implemented in response to a user input” as recited in independent Claim 27. As recited and described in the present application, a project datasheet file further may comprise configuration information for at least one user module. The user module (e.g., as shown in Figure 1B of the present application) may be implemented on a manufactured programmable system on a chip in response to a user input (e.g., a user-initiated selection of the user module).

In contrast to the claimed embodiments, Applicants fail to find any teaching or suggestion in Hekmatpour and/or Southgate of a user module implemented in response to a user input as claimed. Further, Applicants fail to find any teaching or suggestion in Hekmatpour and/or Southgate of *a project datasheet file comprising configuration information for at least one user module implemented in response to a user input as claimed*. Accordingly, Applicants

reiterate that both Hekmatpour and Southgate, either alone or in combination, fail to teach or suggest the limitations of “wherein said project datasheet file further comprises configuration information for at least one user module implemented in response to a user input” as recited in independent Claim 27.

Applicants respectfully assert that both Hekmatpour and Southgate, either alone or in combination, fail to teach or suggest the limitations of “wherein said project datasheet file further comprises configuration information for at least one user module ... implemented using a block of said programmable system on a chip” as recited in independent Claim 27. As recited and described in the present application, a project datasheet file further may comprise configuration information for at least one user module implemented using a block of said programmable system on a chip (e.g., as shown in Figures 1C through 1E of the present application).

In contrast to the claimed embodiments, Applicants fail to find any teaching or suggestion in Hekmatpour and/or Southgate of a user module implemented using a block of a programmable system on a chip as claimed. Further, Applicants fail to find any teaching or suggestion in Hekmatpour and/or Southgate of *a project datasheet file comprising configuration information for at least one user module implemented using a block of a programmable system on a chip as claimed*. Accordingly, Applicants reiterate that both Hekmatpour and Southgate, either alone or in combination, fail to teach or suggest the limitations of “wherein said project datasheet file further comprises configuration information for at least one user module ... implemented using a block of said programmable system on a chip” as recited in independent Claim 27.

Applicants respectfully assert that Hekmatpour fails to teach or suggest the limitations of “displaying said project datasheet file, wherein said displaying comprises a single action display” as recited in Claim 31, and similarly recited in Claims 40 and 46. As recited and described in the present application, a project datasheet file is displayed using a single action display. A single action display may be initiated by, for example, clicking on an icon associated with the project datasheet file, where the project datasheet file is displayed in response to the clicking.

In contrast to the claimed embodiments, Applicants fail to find any teaching or suggestion in Hekmatpour of a single action display. Although Hekmatpour may teach that data is output (paragraph 13), Hekmatpour fails to teach how the data is output. More specifically, Hekmatpour fails to teach or suggest that the data is output using a single action display as claimed.

Applicants respectfully assert that Southgate, either alone or in combination with Hekmatpour, fails to cure the deficiencies of Hekmatpour discussed above. Specifically, Applicants respectfully assert that Southgate also fails to teach or suggest the limitations of “displaying said project datasheet file, wherein said displaying comprises a single action display” as recited in Claim 31, and similarly recited in Claims 40 and 46.

Applicants respectfully assert that both Hekmatpour and Southgate, either alone or in combination, fail to teach or suggest the limitations of “in response to a user-initiated change to said configuration of said manufactured programmable system on a chip, accessing updated data associated with said configuration of said manufactured programmable system on a chip” as recited in Claim 34, and

similarly recited in Claims 42 and 48. As recited and described in the present application, in response to a user-initiated change to a configuration of a manufactured programmable system on a chip, updated data associated with the configuration of the manufactured programmable system on a chip is accessed.

In contrast to the claimed embodiments, Applicants fail to find any teaching or suggestion in Hekmatpour and/or Southgate of accessing updated data associated with a configuration of a manufactured programmable system on a chip as claimed. Additionally, Applicants fail to find any teaching or suggestion in Hekmatpour and/or Southgate of accessing updated data associated with a configuration of a manufactured programmable system on a chip *in response to a user-initiated change to the configuration of the manufactured programmable system on a chip* as claimed. Accordingly, Applicants reiterate that both Hekmatpour and Southgate, either alone or in combination, fail to teach or suggest the limitations of “in response to a user-initiated change to said configuration of said manufactured programmable system on a chip, accessing updated data associated with said configuration of said manufactured programmable system on a chip” as recited in Claim 34, and similarly recited in Claims 42 and 48.

For these reasons, Applicants respectfully submit that independent Claim 27 is not rendered obvious by Hekmatpour in view of Southgate, thereby overcoming the 35 U.S.C. §103(a) rejection of record. Since independent Claims 36 and 43 recite limitations similar to those discussed above with respect to independent Claim 27, independent Claims 36 and 43 also overcome the 35 U.S.C. §103(a) rejections of record. Since dependent Claims 28-35, 37-42, 44-51 recite further limitations to the invention claimed in their respective

independent Claims, dependent Claims 28-35, 37-42, 44-51 are also not rendered obvious by Hekmatpour in view of Southgate. Therefore, Claims 27-51 are allowable.

Claims 24-26

Claims 24-26 are rejected in the present Office Action under 35 U.S.C. §103(a) as being unpatentable over Hekmatpour in view of Southgate. Newly-added Claims 49-51 are based on cancelled Claims 24-26. Claims 24-26 are cancelled herein, and as such, a discussion of the 35 U.S.C. §103(a) rejections of Claims 24-26 is moot.

Applicants respectfully direct the Examiner to independent Claim 49 that recites a computer-implemented method for generating design information comprising (emphasis added):

detecting a selection of a plurality of global parameters associated with a manufactured programmable system on a chip;
in response to a selection of a user module for configuring said manufactured programmable system on a chip, placing said user module within a plurality of programmable hardware resources of said manufactured programmable system on a chip;
in response to a selection of at least one parameter for said user module, establishing connections for said user module; and
automatically generating a project datasheet file comprising said information about said parameterized user module, said project datasheet file further comprising information about said connections and said global parameters associated with said parameterized user module, and wherein said project datasheet file further comprises pinout assignment data for said manufactured programmable system on a chip.

Claims 50-51 depend from independent Claim 49 and recite further limitations to the claimed invention.

Applicants respectfully assert that Hekmatpour fails to teach or suggest the limitations of “detecting a selection of a plurality of global parameters associated with a manufactured programmable system on a chip” as recited in

independent Claim 49. As recited and described in the present application, a selection of a plurality of global parameters associated with a manufactured programmable system on a chip is detected.

In contrast to the claimed embodiments, Applicants fail to find any teaching or suggestion in Hekmatpour of detecting a selection of a plurality of global parameters associated with a manufactured programmable system on a chip. Moreover, Applicants understand the cited portion of Hekmatpour to teach generic elements which may be in a SOCML document (paragraph 41). However, assuming *arguendo* that an element as taught by Hekmatpour is analogous to a plurality of global parameters as claimed, Applicant respectfully assert that Hekmatpour teaches away from the claimed embodiments by teaching *generic* elements instead of a plurality of global parameters associated with a specific manufactured programmable system on a chip as claimed.

Applicants respectfully assert that Southgate, either alone or in combination with Hekmatpour, fails to cure the deficiencies of Hekmatpour discussed above. Specifically, Applicants respectfully assert that Southgate also fails to teach or suggest the limitations of “detecting a selection of a plurality of global parameters associated with a manufactured programmable system on a chip” as recited in independent Claim 49.

Applicants respectfully assert that Hekmatpour fails to teach or suggest the limitations of “in response to a selection of a user module for configuring said manufactured programmable system on a chip, placing said user module within a plurality of programmable hardware resources of said manufactured programmable system on a chip” as recited in independent Claim 49. As recited

and described in the present application, in response to a selection of a user module for configuring a manufactured programmable system on a chip, the user module is placed within a plurality of programmable hardware resources of the manufactured programmable system on a chip.

In contrast to the claimed embodiments, Applicants fail to find any teaching or suggestion in Hekmatpour of placing a user module within a plurality of programmable hardware resources of a manufactured programmable system on a chip as claimed. Further, Applicants fail to find any teaching or suggestion in Hekmatpour of placing a user module within a plurality of programmable hardware resources of a manufactured programmable system on a chip *in response to a selection of the user module for configuring the manufactured programmable system on a chip* as claimed. Accordingly, Applicants reiterate that Hekmatpour fails to teach or suggest the limitations of “in response to a selection of a user module for configuring said manufactured programmable system on a chip, placing said user module within a plurality of programmable hardware resources of said manufactured programmable system on a chip” as recited in independent Claim 49.

Applicants respectfully assert that Southgate, either alone or in combination with Hekmatpour, fails to cure the deficiencies of Hekmatpour discussed above. Specifically, Applicants respectfully assert that Southgate also fails to teach or suggest the limitations of “response to a selection of a user module for configuring said manufactured programmable system on a chip, placing said user module within a plurality of programmable hardware resources of said manufactured programmable system on a chip” as recited in independent Claim 49.

Applicants respectfully assert that Hekmatpour fails to teach or suggest the limitations of “in response to a selection of at least one parameter for said user module, establishing connections for said user module” as recited in independent Claim 49. As recited and described in the present application, connections for a user module are established in response to a selection of at least one parameter for the user module.

In contrast to the claimed embodiments, Applicants fail to find any teaching or suggestion in Hekmatpour of establishing connections for a user module as claimed. Additionally, Applicants fail to find any teaching or suggestion in Hekmatpour of establishing connections for a user module *in response to a selection of at least one parameter for the user module as claimed*. Accordingly, Applicants reiterate that Hekmatpour fails to teach or suggest the limitations of “in response to a selection of at least one parameter for said user module, establishing connections for said user module” as recited in independent Claim 49.

Applicants respectfully assert that Southgate, either alone or in combination with Hekmatpour, fails to cure the deficiencies of Hekmatpour discussed above. Specifically, Applicants respectfully assert that Southgate also fails to teach or suggest the limitations of “in response to a selection of at least one parameter for said user module, establishing connections for said user module” as recited in independent Claim 49.

Applicants respectfully assert that Hekmatpour fails to teach or suggest the limitations of “automatically generating a project datasheet file comprising

said information about said parameterized user module” and “said project datasheet file further comprising information about said connections and said global parameters associated with said parameterized user module” as recited in independent Claim 49. As recited and described in the present application, a project datasheet file is automatically generated comprising information about a parameterized user module. The project datasheet file further comprises information about connections and global parameters associated with the parameterized user module.

In contrast to the claimed embodiments, Applicants fail to find any teaching or suggestion in Hekmatpour of automatically generating a project datasheet file comprising information about a parameterized user module as claimed. Additionally, Applicants fail to find any teaching or suggestion in Hekmatpour of a project datasheet file which further comprises information about connections and global parameters associated with the parameterized user module as claimed. Accordingly, Applicants reiterate that Hekmatpour fails to teach or suggest the limitations of “automatically generating a project datasheet file comprising said information about said parameterized user module” and “said project datasheet file further comprising information about said connections and said global parameters associated with said parameterized user module” as recited in independent Claim 49.

Applicants respectfully assert that Southgate, either alone or in combination with Hekmatpour, fails to cure the deficiencies of Hekmatpour discussed above. Specifically, Applicants respectfully assert that Southgate also fails to teach or suggest the limitations of “automatically generating a project datasheet file comprising said information about said parameterized user

module” and “said project datasheet file further comprising information about said connections and said global parameters associated with said parameterized user module” as recited in independent Claim 49.

For these reasons, Applicants respectfully submit that independent Claim 49 is not rendered obvious by Hekmatpour in view of Southgate, thereby overcoming the 35 U.S.C. §103(a) rejection of record. Since dependent Claims 50-51 recite further limitations to the invention claimed in independent Claim 49, dependent Claims 50-51 are also not rendered obvious by Hekmatpour in view of Southgate. Therefore, Claims 49-51 are allowable.

Claims 2-3, 6, 12, 15, 18-19 and 22

Claims 2-3, 6, 12, 15, 18-19 and 22 are rejected in the present Office Action under 35 U.S.C. §103(a) as being unpatentable over Hekmatpour in view of Southgate, and further in view of United States Patent Number 6,748,569 to Brooke (hereafter referred to as “Brooke”). Claims 2-3, 6, 12, 15, 18-19 and 22 are cancelled herein, and as such, a discussion of the 35 U.S.C. §103(a) rejections of Claims 2-3, 6, 12, 15, 18-19 and 22 is moot.

Applicants respectfully assert that Hekmatpour fails to teach or suggest the limitations of “wherein said block is selected from a group consisting of an analog block and a digital block” as recited in Claim 29, and similarly recited in Claims 44 and 38. As recited and described in the present application, a block (e.g., used to implement a user module of a manufactured programmable system on a chip) may comprise an analog block and/or a digital block.

In contrast to the claimed embodiments, Applicants fail to find any teaching or suggestion in Hekmatpour an analog block used to implement a user module of a manufactured programmable system on a chip as claimed. Additionally, Applicants fail to find any teaching or suggestion in Hekmatpour a digital block used to implement a user module of a manufactured programmable system on a chip as claimed. Accordingly, Applicants reiterate that Hekmatpour fails to teach or suggest the limitations of “wherein said block is selected from a group consisting of an analog block and a digital block” as recited in Claim 29, and similarly recited in Claims 44 and 38.

Applicants respectfully assert that Southgate, either alone or in combination with Hekmatpour, fails to cure the deficiencies of Hekmatpour discussed above. Specifically, Applicants respectfully assert that Southgate also fails to teach or suggest the limitations of “wherein said block is selected from a group consisting of an analog block and a digital block” as recited in Claim 29, and similarly recited in Claims 44 and 38.

Additionally, Applicants respectfully submit that Brooke, either alone or in combination with Hekmatpour and/or Southgate, fails to cure the deficiencies of the Hekmatpour/Southgate combination discussed above with respect to independent Claims 27 and 43. Specifically, Brooke fails to teach or suggest the limitations “accessing data associated with a configuration of a manufactured programmable system on a chip,” “wherein said project datasheet file comprises pinout assignment data for said manufactured programmable system on a chip,” “wherein said project datasheet file further comprises configuration information for at least one user module implemented in response to a user input,” and “wherein said project datasheet file further comprises configuration information

for at least one user module... implemented using a block of said programmable system on a chip” as recited in independent Claim 27. Consequently, since Claims 28-35 and 44-51 recite further limitations to the invention claimed in their respective independent Claims, Claims 28-35 and 44-51 are not rendered obvious by Hekmatpour in view of Southgate and further in view of Brooke. Thus, Claims 27-35 and 43-51 overcome the 35 U.S.C. §103(a) rejections of record, and are therefore allowable.

Claim 10

Claim 10 is rejected in the present Office Action under 35 U.S.C. §103(a) as being unpatentable over Hekmatpour in view of Southgate, and further in view of United States Patent Number 6,704,893 to Bauwens (hereafter referred to as “Bauwens”). Claim 10 is cancelled herein, and as such, a discussion of the 35 U.S.C. §103(a) rejection of Claim 10 is moot.

CONCLUSION

Applicants respectfully assert that Claims 27-51 are in condition for allowance and Applicants earnestly solicit such action from the Examiner.

The Examiner is urged to contact Applicants' undersigned representative if the Examiner believes such action would expedite resolution of the present Application.

Please charge any additional fees or apply any credits to our PTO deposit account number: 50-4160.

Respectfully submitted,

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Dated: 10/31, 2007

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